

**REISSUE APPLICATION DECLARATION  
AND POWER OF ATTORNEY BY INVENTOR**

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name, I believe that I am the original, first and sole inventor of the subject matter that is described and claimed in Letters Patent No. 5,952,983, granted on September 14, 1999, and in the foregoing specification, and for which invention I solicit a reissue patent.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims.

I acknowledge the duty to disclose information that is material to the examination of this application, namely, information where there is a substantial likelihood that a reasonable examiner would consider it important in deciding whether to allow the application to issue as a patent, in accordance with 37 CFR § 1.175(a)(7). In compliance with this duty, an Information Disclosure Statement is submitted herewith in accordance with 37 CFR § 1.98.

I hereby claim foreign priority benefits under 35 USC § 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

**PRIOR FOREIGN PATENTS**

<u>Number</u>	<u>Country</u>	<u>Month/Day/ Year Filed</u>	<u>Date first laid-open or Published</u>	<u>Date patented or Granted</u>	<u>Priority Claimed</u>	<u>Yes</u>	<u>No</u>
NONE							

I hereby claim the benefit under 35 USC § 119(e) of any United States provisional application(s) listed below.

**PRIOR U.S. OR PCT APPLICATIONS**

NONE

<u>(Application Serial No.)</u>	<u>(Filing Date)</u>	<u>(Status)</u>
---------------------------------	----------------------	-----------------

I verily believe the original patent to be partly inoperative because of error without any deceptive intent on the part of the Applicant. (37 CFR § 1.175(a)(6)).

The statement below specifies the errors relied upon, and how they arose (37 CFR § 1.175(a)(5)).

X why the original patent is believed to be wholly or partly inoperative or invalid (37 CFR § 1.175(a)(1))

\_\_\_\_\_ particularly, the defects upon which the claim that such patent is inoperative or invalid "by reason of a defective specification or drawing" is based (37 CFR § 1.175(a)(2))

X distinctly, the excess or insufficiency in the claims that make the patent inoperative or invalid "by reason of the patentee claiming more or less than he had a right to claim in the patent" (37 CFR § 1.175(a)(3))

\_\_\_\_\_ corroborating affidavits or declarations of others accompany this Declaration (37 CFR § 1.175(b))

1. The claims of U.S. Patent No. 5,952,983 (hereinafter "'983 patent") are defective in that they claim less than the Patentee was entitled to claim.
2. Of the five independent claims in the '983 patent, three claims (claims 1, 10, and 19) ("the apparatus claims") are directed to an antenna for simultaneously receiving separate electromagnetic signals. The remaining independent claims (claims 16 and 27) ("the method claims") are directed to a method for providing high isolation for an array of radiating elements.
  - a) Each of the apparatus claims recites a combination of elements which, among other things, includes:
    - a plurality of dipole radiating elements, said radiating elements comprised of first and second co-located, orthogonal dipoles, said dipoles aligned at first and second predetermined angles with respect to said vertical axis, said radiating elements and ground plane producing first electromagnetic fields in response to said electromagnetic signals;
    - a plurality of non-conductive supports, said supports connected to said ground plane and perpendicular to said vertical axis and placed between selected of said plurality of dipole radiating elements;and
    - a plurality of independent metallic parasitic elements unconnected to said dipoles and placed in a selected of said plurality of supports, . . .
  - b) Each of the method claims recites:
    - providing a plurality of dipole radiating elements, said radiating elements comprised of first and second co-located, orthogonal

dipoles, said dipoles aligned at a predetermined angle with respect to said vertical axis, said radiating elements having a top surface,

providing a plurality of non-conductive supports, and placing said supports perpendicular to said vertical axis in between selected of said plurality of dipole radiating elements;

and

for providing a plurality of independent metallic parasitic elements unconnected to said dipoles and placed in a selected of said plurality of supports.

- c) The specification disclosed a new antenna design in which one or more metallic parasitic elements were utilized to cancel selected portions of the electromagnetic fields of the radiating elements, thereby improving isolation. The problem of interaction of the electromagnetic fields and mutual coupling, with the amount of coupling referred to as "isolation," is discussed at column 1, lines 47-57 of the patent. Also at column 2, lines 14-17, the patent states:

It is another object of the invention to provide an antenna array which improves isolation between the sum of one set of like-polarized signals and the sum of the orthogonal set of polarized signals.

Thus, the patent is considered defective in failing to claim an antenna array having parasitic elements for canceling portions of the electromagnetic fields and thereby improving isolation between orthogonal sets of polarized signals, without the additional recitations mentioned above. New claims 30 and 34 are presented in this reissue application directed to an antenna (or to a method of providing improved isolation for an antenna) having (see claim 30) one or more parasitic elements, (see claim 30) without the additional recitations mentioned above.

3. In the independent claims of the patent, as noted above, the radiating elements are characterized as "dipole" elements and as comprised of "first and second co-located, orthogonal dipoles, said dipoles aligned at first and second predetermined angles with respect to said vertical axis." These limitations are unnecessary to patentability.

Furthermore, the non-conductive supports are further characterized in the patent claims as being "connected to said ground plane and perpendicular to said vertical axis and placed between selected of said plurality of dipole radiating elements." This limitation is also unnecessary to patentability of the combination of an antenna including the parasitic elements.

Accordingly, the new apparatus claims 30-34 as presented herewith are directed to the combination of elements including the ground plane, radiating elements, and parasitic elements. Similarly, the newly presented method claims 35-37 are directed to a method wherein there is provided a ground plane, a plurality of radiating elements, and a plurality of independent parasitic elements.

4. An Information Disclosure Statement is being submitted with this reissue application. The new claims are believed to be patentable over the references cited therein.
5. The patent issued September 14, 1999. On or about August 23, 2000, Martin Zimmerman of Andrew Corporation, the assignee of this patent, reviewed the patent and contacted outside patent counsel, regarding the scope of the claims of the patent. Upon review, the outside patent counsel reached a conclusion, and I concur on this conclusion, that the patent claims granted are of narrower scope than those which could have been allowed. In particular, I believe that claims 30-37 presented herewith are patentable over the prior art known to us. Thus this reissue application is being filed containing such claims within the statutory period.

A Certificate under 37 CFR § 3.73(b), establishing the right of the assignee to take action in this reissue, is submitted herewith.

I hereby appoint the following attorneys and/or agents to prosecute this application and transact all business in the U.S. Patent and Trademark Office connected therewith.

TIMOTHY G. ACKERMANN, Reg. No. 44,493  
BENJAMIN J. BAI, Reg. No. 43,481  
JOSEPH M. BEAUCHAMP, Reg. No. 46,544  
MARY JO BOLDINGH, Reg. No. 34,713  
MARGARET A. BOULWARE, Reg. No. 28,708  
DANIEL J. BURNHAM, Reg. No. 39,618  
THOMAS L. CANTRELL, Reg. No. 20,849  
RONALD B. COOLLEY, Reg. No. 27,187  
THOMAS L. CRISMAN, Reg. No. 24,846  
STUART D. DWORK, Reg. No. 31,103  
WILLIAM F. ESSER, Reg. No. 38,053  
ROGER J. FRENCH, Reg. No. 27,786  
JANET M. GARETTO, Reg. No. 42,568  
MARK GATSCHET, Reg. No. 42,569  
JOHN C. GATZ, Reg. No. 41,774  
RUSSELL J. GENET, Reg. No. 42,571  
GERALD H. GLANZMAN, Reg. No. 25,035  
LEKHA GOPALAKRISHNAN, Reg. No. 46,733  
J. KEVIN GRAY, Reg. No. 37,141  
KEITH P. GRAY, Reg. No. 46,738

STEVEN R. GREENFIELD, Reg. No. 38,166  
JOSHUA A. GRISWOLD, Reg. No. 46,310  
J. PAT HEPTIG, Reg. No. 40,643  
SHARON A. ISRAEL, Reg. No. 41,867  
JOHN R. KIRK JR., Reg. No. 24,477  
PAUL R. KITCH, Reg. No. 38,206  
TIMOTHY M. KOWALSKI, Reg. No. 44,192  
JAMES F. LEA III, Reg. No. 41,143  
HSIN-WEI LUANG, Reg. No. 44,213  
ROBERT W. MASON, Reg. No. 42,848  
ROGER L. MAXWELL, Reg. No. 31,855  
LISA H. MEYERHOFF, Reg. No. 36,869  
STANLEY R. MOORE, Reg. No. 26,958  
RICHARD J. MOURA, Reg. No. 34,883  
MARK V. MULLER, Reg. No. 37,509  
P. WESTON MUSSELMAN JR., Reg. No. 31,644  
DANIEL G. NGUYEN, Reg. No. 42,933  
MICHAEL K. NUTTER, Reg. No. 44,979  
SPENCER C. PATTERSON, Reg. No. 43,849  
RUSSELL N. RIPPAMONTI, Reg. No. 39,521

ROSS T. ROBINSON, Reg. No. 47,031  
STEPHEN G. RUDISILL, Reg. No. 20,087  
HOLLY L. RUDNICK, Reg. No. 43,065  
J.L. JENNIE SALAZAR, Reg. No. 45,065  
KEITH W. SAUNDERS, Reg. No. 41,462  
JERRY R. SELINGER, Reg. No. 26,582  
JAMES O. SKARSTEN, Reg. No. 28,346  
ZACHARY J. SMOLINSKI, Reg. No. 47,100  
GARY B. SOLOMON, Reg. No. 44,347  
STEVE Z. SZCZEPANSKI, Reg. No. 27,957  
ANDRE M. SZUWALSKI, Reg. No. 35,701  
ALAN R. THIELE, Reg. No. 30,694  
TAMSEN VALOIR, Reg. No. 41,417  
RAYMOND VAN DYKE, Reg. No. 34,746  
BRIAN D. WALKER, Reg. No. 37,751  
GERALD T. WELCH, Reg. No. 30,332  
HAROLD N. WELLS, Reg. No. 26,044  
WILLIAM D. WIESE, Reg. No. 45,217


I hereby direct that all correspondence and telephone calls be addressed as follows.

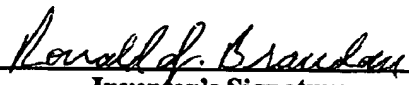
Stephen G. Rudisill, Esq.  
Jenkins & Gilchrist, P.C.  
1445 Ross Avenue, Suite 3200  
Dallas, Texas 75202-2799  
312/425-8570  
214/855-4300 (fax)

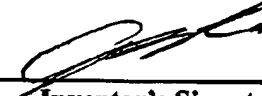
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

105080 "E" 16E22660

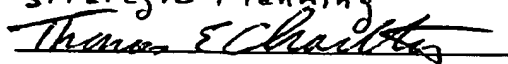
NAMED INVENTOR(S)

1 Russell W. Dearnley  17 July 2001.  
Full Name Inventor's Signature Date  
932 Hidden Lake Road, Naperville, IL 60565 United States  
Residence (city, state, country) Citizenship  
Same as Residence  
Post Office Address (include zip code)

2 Ronald J. Brandau  6-19-01  
Full Name Inventor's Signature Date  
14613 W. 163<sup>rd</sup> ST., LOCKPORT, IL 60441  
6841 W. 175<sup>th</sup> Place, Tinley Park, IL 60477 United States  
Residence (city, state, country) Citizenship  
Same as Residence  
Post Office Address (include zip code)

3 George Xu  7-26-01  
Full Name Inventor's Signature Date  
22 Compton Street, Reservoir, Vic 3073 Australia Australia  
Residence (city, state, country) Citizenship  
Same as Residence  
Post Office Address (include zip code)

On behalf of the Assignee, I hereby assent to the statements and changes proposed above by the inventor,

Full name of Assignee: Andrew Corporation  
Address: 10500 W. 153<sup>rd</sup> Street, Orland Park, Illinois 60462  
Person signing on behalf of Assignee: Thomas A. Charlton  
Title: Group President Antenna Products  
Strategic Planning  
Signature:   
Date: JUNE 19, 2001